As of December 19, 2014

Q27: When discussing the attacks on the system, are we specifically considering only the effects of attacks on the black side, or is detection and mitigation of attacks on the red side (e.g. volumetric attacks against enclaves) in scope?

A27: This program is interested in attacks on (and originating within) the WAN (the black network). A volumetric attack that originates within the black network, and that is aimed at an enclave ingress point (the encryption device fronting the enclave) is within scope for the program. Attacks originating from within EdgeCT-enabled enclaves are not in scope for the program.

Q26: Regarding the "Average Network Overhead per Enclave" metric, what is the envisioned measurement window over which the averages are determined? Is it a fixed window of time (e.g., five minutes), the total time under test, or something else?

A26: The relevant window would correspond to the duration of the specific mission scenario being tested or demonstrated, which could be anywhere from minutes to hours.

Q25: Does the Government envision ITAR restrictions for EdgeCT technology?

A25: The Government cannot presently determine whether export control restrictions might apply to EdgeCT technology because the Government does not know what technologies might be proposed or produced. It is up to performers to ensure compliance with export control laws and any ITAR restrictions.

Q24: If the solution adds a header to the original packet does the size of the header count toward the 10 kbps limit?

A24: No, extra headers will not count toward the 10 kb/s overhead measure, but they would nonetheless consume some amount of bandwidth and could therefore degrade application performance. So solutions should take this issue into consideration.

Q23:   The BAA and the slide set both mention that we should expect publication limitations. Can you explain what the limitations might be for universities?

A23:   Universities performing research on university campuses will be exempt from publication restrictions, whether as a prime or subcontractor.

Q22:   Will the testbed be accessible via VPN or do we need to assume physical presence at the testbed for the purpose of connecting to the testbed?

A22:   The testbed will be remotely accessible. Remote accessibility is a requirement for the TA2 performer's experimental platform, per EdgeCT BAA page 12.

Q21:   Will the recording of the Proposers' Day be made available?

A21:   Probably not, but we will pursue this possibility. Please note that the technical slide presentation from the Proposers' Day has been posted to http://www.darpa.mil/Opportunities/Solicitations/I2O_Solicitations.aspx.

Q20:   Can you provide examples of scenarios?

A20:   Scenario details are TBD, but one example would be distributed database synchronization for situational awareness and common operational picture.

Q19:   Does the term "encryption boundary" refer to the entire end crypto unit (ECU) or just the crypto subsystem of the ECU?

A19:   The term refers to the entire box(es) performing HAIPE, IPSEC, or double walled encryption.

Q18:   What is the target of TRL after phases 1 or 2?

A18:   TRL 6 after phase 2.

Q17:   Would a system that requires application-layer processes to register tasks (or flows) utilities and/or deadlines be in scope?

A17:   Yes. However, per EdgeCT BAA page 11, approaches that do not require modification of existing applications are preferred.

Q16: Would you consider selecting performers on TA1 and TA2/3 from the same large organization if an OCI mitigation plan is provided with stringent organizational firewalls?

A16: No.

Q15: Would it be more appropriate to interpret the phrase "encryption boundary" or "information boundary" relatively generally or would it be more appropriate to assume specifics of HAIPE behavior, and if so, any particular version of the standard?

A15: Assume a standalone in-line network encryptor that passes no information in the clear from red-to-black or vice versa, with the exception of multicast join messages with a time to live (TTL) value of 1 in the IP TTL header.

Q14: What SA information do you want to see?

A14: Summarizations of WAN state and application state in whatever forms makes sense for your project. Other possible examples might be pending decisions, ongoing utility measures, or status from other enclaves.

Q13: One encryption gateway per pair or one encryption gateway for all other enclaves?

A13: One gateway per enclave.

Q12: Is instrumenting protocol stacks on hosts allowed, or must it be MITM?

A12: Either or both are permitted.

Q11: For TA2 do you envision HYBRID (wired and wireless) network scenario with MOBILITY? What's the typical code number per enclave?

A11: No MOBILITY, but SATCOM access links are in scope.

Q10: Just to re-clarify: EACH TA1 team will need to propose COMPLETE solution, right?

A10: Yes.

Q9: Does mitigation of packet loss by added redundancy/replication count against the constraint on overhead (10kbps or 1%)?

A9: No.

Q8: Should we consider more enclaves than 12 for design purposes?

A8: You are free to design for more than 12.

Q7:   Does the ciphertext WAN operate under one administrative domain or multiple independent, administrative domains?

A7:   The WAN may comprise a large number of administrative domains.

Q6:   How much is writing and processing mission plans a part of the BAA?

A6:   Writing and processing mission plans are not a part of the EdgeCT BAA.

Q5:   Please clarify/confirm that EdgeCT is strictly restricted to the "user enclaves hanging off a single black box WAN" i.e., scenarios involving multiple WAN black boxes is not in scope.

A5:   For simplicity, proposers can assume a single WAN.

Q4:   Is the 10kbps limit per node or per WAN?

A4:   The 10 Kb/s limit refers to the average overhead per user enclave - see EdgeCT BAA page 14.

Q3:   Should all WAN nodes be prioritized equally?

A3:   No. In general, user enclaves may have different priorities. See EdgeCT BAA page 10.

Q2:   How does one register as a prospective proposing university?

A2:   The EdgeCT BAA pp. 33-34 have directions for how to begin the proposal submission process, either for a procurement contract/other transaction agreement or for a cooperative agreement proposal. Other award requirements such as SAM registration procedures are outlined in Section VI of the BAA.

Q1:   Is scope constrained to operation on the cleartext side of the red/black boundary?

A1:   Yes.